

Claims

- 1 1. An illuminated exit device comprising:
2 a door latch mechanism;
3 a base for attachment to a surface of a door;
4 an actuator movably mounted relative to the base and connected to operate the
5 latch mechanism when pressure is applied to the actuator;
6 a planar electroluminescent illuminator including electrical wiring extending
7 through the exit device for connection to a source of electrical power;
8 a planar sign including opaque portions for blocking illumination from the
9 electroluminescent illuminator, the sign being mounted in front of the
10 electroluminescent illuminator; and
11 a transparent protective cover mounted in front of the sign, the illuminator, sign
12 and covering plate forming a sign assembly visibly mounted on the exit
13 device.
- 1 2. The illuminated exit device according to claim 1 wherein the actuator
2 comprises an elongated pushbar.
- 1 3. The illuminated exit device according to claim 1 wherein the sign assembly
2 is mounted on the actuator and pressure applied to the sign assembly will operate
3 the exit device.
- 1 4. The illuminated exit device according to claim 1 further including a
2 touchpad mounted on the actuator, and wherein the sign assembly is mounted on
3 the touchpad.
- 1 5. The illuminated exit device according to claim 4 wherein the touchpad
2 includes a surface cavity in a surface thereof and the sign assembly is mounted in
3 the surface cavity with the transparent protective cover positioned flush with the
4 surface of the touchpad.

1 6. The illuminated exit device according to claim 4 wherein the touchpad is
2 formed of an electrically insulating material providing an electrically insulating
3 barrier between the electroluminescent illuminator and other parts of the exit
4 device.

1 7. The illuminated exit device according to claim 6 wherein the touchpad is
2 formed of plastic.

1 8. The illuminated exit device according to claim 6 wherein the
2 electroluminescent illuminator is encased in a transparent plastic comprising an
3 additional electrical insulator to provide double electrical insulation between the
4 electroluminescent illuminator and other parts of the exit device.

1 9. The illuminated exit device according to claim 1 wherein the planar sign
2 comprises an opaque film adhesively attached to the transparent protective cover.

1 10. The illuminated exit device according to claim 9 wherein the planar sign
2 comprises an opaque paint.

1 11. The illuminated exit device according to claim 1 wherein the sign includes
2 letters forming the word "EXIT" and/or other verbage in English or other language
3 thereon.

1 12. The illuminated exit device according to claim 1 wherein the
2 electroluminescent illuminator is encased in a transparent plastic comprising an
3 electrical insulator.

1 13. The illuminated exit device according to claim 1 further including a
2 touchpad mounted on the actuator, and wherein:

3 the touchpad includes a surface cavity in a surface thereof and the surface cavity
4 includes a plurality of openings;
5 the transparent cover includes a plurality of tabs; and
6 the sign assembly is held in the surface cavity by engagement between the tabs
7 of the cover and the openings in the surface cavity.

1 14. The illuminated exit device according to claim 1 further including an
2 inverter for supplying power to the electroluminescent illuminator.

1 15. The illuminated exit device according to claim 14 wherein the inverter
2 operates to provide a high voltage AC power to the electroluminescent illuminator
3 from a low voltage input to the inverter, the low voltage not presenting a shock
4 hazard.

1 16. The illuminated exit device according to claim 14 wherein the inverter
2 provides high voltage AC power to the electroluminescent illuminator from a low
3 voltage which is suitable for driving electromechanical locks and hardware.

1 17. The illuminated exit device according to claim 14 wherein the inverter
2 provides high voltage AC power to the electroluminescent illuminator from a 24
3 volts AC or DC power input to the inverter.

1 18. The illuminated exit device according to claim 14 wherein the inverter is
2 mounted in the base.

1 19. The illuminated exit device according to claim 1 wherein:
2 the base includes an opening facing towards the surface of the door on which
3 the base is to be attached, and
4 the electrical wiring is hidden from view within the exit device and extends
5 from the electroluminescent illuminator to the opening in the base whereby

6 the electroluminescent illuminator may be electrically connected to hidden
7 power wiring in the door extending from an electrical hinge to an opening in
8 the door surface, the opening in the base being located opposite the opening
9 in the door surface to permit connection between the power wiring and the
10 internal wiring.

1 20. The illuminated exit device according to claim 1 wherein the transparent
2 cover is removable without removal of the exit device from the door to permit
3 replacement or repair of the electroluminescent illuminator.